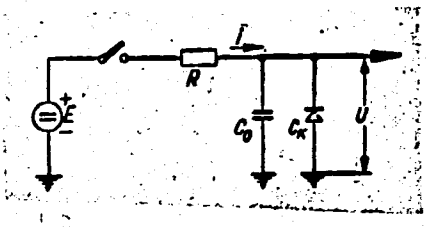
Linearization of ....

S/142/62/005/005/009/009
E192/E382

ASSOCIATION: Kafedra teoreticheskikh osnov radiotekhniki Moskovskogo aviatsionnogo instituta (Department of Theoretical Principles of Radio-engineering of Moscow Aviation Institute)

SUBMITTED: June 15, 1961 (initially)
September 20, 1961 (after revision)

Fig. 2:



Card 3/3

S/142/62/005/006/004/011
E192/E382

2.2110

AUTHORS: Shestopalov, A.M. and Samoylenko, V.I.

TITLE: Capacitance of a varicap and the distribution of ionized impurities in its p-n junction

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 5, no. 6, 1962, 688 - 698

TEXT: A semiconductor junction, in which the concentration of ionized impurities varies along the axis perpendicular to the plane of the junction, is considered. The structure of the space charge in the region of the p-n junction is illustrated in Fig.1, where the coordinates x_1 and x_2 correspond to the boundaries of the depletion layer. The differential capacitance of the junction is expressed by a formula similar to that of a parallel plate capacitor, i.e.

$$C = \frac{\varepsilon S}{4\pi (x_2 - x_1)} \qquad (1),$$

where ε is the permittivity of the semiconductor material and S is the area of the p-n junction. The problem consists of

Capacitance of a varicap ....

finding the conditions under which the capacitance of the junction (varicap) is a prescribed function of the voltage U applied to it. The function C(U) should be monotonically decreasing since with increasing external voltage the depletion layer is increased and the capacitance of the junction reduced. It is assumed that the distribution $\rho(x_2)$ for one of the regions of the p-n junction is known. This is necessary in order to be able to determine the distribution $\rho(x_1)$ for the other region so that the required function C(U) is achieved. It is found under these conditions that:

$$\rho(x_1) = \frac{\rho(x_2)}{1 + \frac{\varepsilon S}{4\pi C^2(x_2)} \cdot \frac{dC}{dx_2}} \qquad (9)$$

This expression can be used for determining $\rho(x_1)$ for a given C(U) and $\rho(x_2)$. In general, the required C(U) is in the form:

Capacitance of a varicap ....

$$C = C_o \left(\frac{\varphi_K}{U + \varphi_K} \right)^n \qquad (13),$$

where C_o is the initial capacitance and φ_K is the contact potential. For this C(U) Eq. (9) is used to evaluate $\varrho(x_1)$ when $\varrho(x_2) = \varrho x_2^m$ and $\varrho'(x_2) = \varrho$. Eq. (9) can be used for approximate calculation of the acceptor (or donor) distribution for a given distribution of donors (or acceptors) and a given experimental graph showing the functional dependence of the capacitance on the applied voltage U. There are 6 figures.

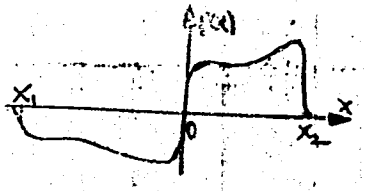
ASSOCIATION: Kafedra teoreticheskoy radiotekhniki Moskovskogo ordena Lenina aviatsionnogo instituta imeni Sergo Ordzhonikidze (Department of Theoretical Radioengineering of Moscow "Order of Lenin" Aviation Institute imeni Sergo Ordzhonikidze)

SUBMITTED: January 30, 1962 (initially)
April 23, 1962

Capacitance of a varicap ....

S/142/62/005/006/004/011
E192/E382

Fig. 1:



Card 4/4

SAMOYLENKO, V.I.; FINOGENOV, B.S.

Parametric generator with two steady frequency states. Trudy MAI no.149:66-73 '62. (MIRA 15:12)
(Oscillators, Electric) (Parametric amplifiers)

SAMOYLENKO, V.I.; GLOTOV, I.A.

Trigger effects in a circuit containing a nonlinear p-n junction with presence of d.c. feedback. Trudy MAI no.149:74-91 '62.
(MIRA 15:12)

(Pulse circuits)

SAMOYLENKO, V.I.; GLOTOV, I.A.

Stationary conditions in two-stage network of a parametron using the capacitance of a p-n junction. Trudy MAI no.149:92-113 '62. (MIRA 15:12)

(Parametric amplifiers) (Electronic computers)

SAMOYLENKO, V.I.

Nonstationary processes in a parametron using the capacitance of a p-n junction. Trudy MAI no.149:114-133 '62. (MIRA 15:12)
(Electronic computers) (Parametric amplifiers)

SAMOYLENKO, V.I.; ZLOCHEVSKIY, Ye.M.

Study of the dynamic processes of a subharmonic generator using the capacitance of a p-n junction. Trudy MAI no.149:134-147 '62. (MIRA 15:12)

(Electronic computers) (Oscillators, Electric)

SAMOYLENKO, V. I.

Detection operation of transistor diodes. Trudy MAI no.150:5-10 '62. (MIRA 15:10)

(Electric current rectifiers) (Diodes)
(Transistors)

DEMIN, V. P.; SAMOYLENKO, V. I.

Stability of the center frequency of an oscillator containing a p-n junction capacitance. Trudy MAI no.150:35-38 '62. (MIRA 15:10)

(Electric networks) (Transistor circuits)

SHESTOPALOV, A.M.; SAMOYLENKO, V.I.

Capacitance of a variocond and distribution of ionized impurities in its p-n junction. Izv.vys.ucheb.zav.; radiotekh. 5 no.6:688-698 N-D '62. (MIRA 16:1)

1. Rekomendovana kafedroy teoreticheskoy radiotekhniki Moskovskogo ordena Lenina aviatsionnogo instituta imeni Sergo Ordzhonikidze.

(Transistors)

GITIS, Emmanuil Isaakovich. Prinimali uchastiye: SAMOYLENKO, V.I., kand. tekhn. nauk; BALTRUSHEVICH, A.V., kand. tekhn. nauk; ZHDANOV, G.M., prof., retsenzent; KRAYZMER, L.P., kand. tekhn. nauk, retsenzent; FLID, Ya.I., kand. tekhn. nauk, red.

[Automatic control of radio systems; electric and automatic control of radio systems] Avtomatika radioustanovok; elektroradioavtomatika. Moskva, Energiia, 1964. 631 p.
(MIRA 17:1)

BEL'TYUKOVA, K.I. [Bel'tiukova, K.H.]; KOROLEVA, I.B. [Korol'eva, I.B.]; SAMOYLENKO, V.I.

Use of Trichoderma 5320 (Trichoderma koningi Oud.) against Pseudomonas lachrymans (Erw. Smith A.Bryan) Grssner, causative agent of the angular leaf spot of cucumbers. Mikrobiol. zhur. 26 no.5:8-11 '64. (MIRA 18:7)

1. Institut mikrobiologii i vurusologii AN UkrSSR.

L 45833-66 EWT(d)/EWP(1) IJP(c) BB/GG/JXT(BF)

ACC NR: AP6030574 SOURCE CODE: UR/0413/66/000/016/0055/0055

INVENTOR: Samoylenko, V. I.; Migunov, N. I.; Piskulov, Ye. A.; Puzyrev, V. A.

63
B

ORG: none

TITLE: Method of recording and reading information from a fine anisotropic ferromatnetic film. Class 21, No. 184936 [announced by Moscow Order of Lenin Aviation Institute imeni S. Ordzhonikidze (Moskovskiy ordena Lenina aviatsionyy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 55

TOPIC TAGS: information storage, data recording, data readout, magnetic field

ABSTRACT: A method of recording and reading out of information from fine anisotropic ferromagnetic films is proposed. Recording is accomplished by a field acting along the mean easy axis of magnetization and reading by a field acting along the mean hard axis of magnetization. To store analog information, the value of the field which acts along the mean hard axis must exceed the value

Card 1/2 UDC: 681.142.07

L 45833-66

ACC NR: AP6030574

of the anisotropy field. The recording field value which corresponds to the stored analog information lies within the region of boundary creep and shift, while the value of the reading field lies within the region of nondestructive readout.

[DW]

[Translation]

SUB CODE: 09/ SUBM DATE: 24Jun65/

Card 2/2

ACC NR: AT6034600 SOURCE CODE: UR/2535/66/000/166/0139/0154

AUTHOR: Samoylenko, V. I. (Candidate of technical s nces)

ORG: none

TITLE: Surface phenomena in a metal

SOURCE: Moscow. Aviatsionnyy institut. Trudy, no. 166, 1966. Nelineynyye uzkopolosnyye radiotekhnicheskiye sistemy (Nonlinear narrow band radio engineering systems), 139-154

TOPIC TAGS: electric phenomenon, electron emission, metal surface

ABSTRACT: Phenomena occurring on the surface of a metal are considered on the assumption that the surface potential barrier field is produced by outgoing and incoming electrons. These electrons produce on the surface of the metal a negative space charge which, with its mirror image, causes the potential barrier field. A method is proposed for determining this field on the assumption that the field is fully defined by the distribution of electron velocities within the metal. By knowing this distribution, the field on the surface of the metal can be determined and vice versa. In particular, the structure of the surface potential barrier is studied in vacuum at a temperature approaching the absolute temperature. However, it is found that when the temperature is varied widely, the distribution of electron velocities within the metal changes little only in the region of high velocities. Therefore, when the tem-

Card 1/2 UDC: 621.315.592(04)

ACC NR: AT6034599 SOURCE CODE: UR/2535/66/000/166/0093/0109

AUTHOR: Samoylenko, V. I. (Candidate of technical sciences); Puzyrev, V. A. (Engineer)

ORG: none

TITLE: A ferromagnetic thin-film modulator

SOURCE: Moscow. Aviatsionnyy institut. Trudy, no. 166, 1966. Nelineynyye uzkopolosnyye radiotekhnicheskiye sistemy (Nonlinear narrow band radio engineering systems), 93-109

TOPIC TAGS: thin film circuit, computer memory, circuit design, computer component

ABSTRACT: Utilizing the physical properties of ferromagnetic thin films, a new modulator type was developed. The structure of a thin-film modulator depends, in general, on the operating frequency range. Depending on the carrier frequency and on the rate of change of the controlling (modulating) signal, either a winding, a strip, or a combined version of the modulator is used. The principle of operation of the modulator is explained on the example of the winding version. The basic circuit diagram of the modulator, together with signal diagrams, is given in Fig. 1. Permalloy film 6 forms the basis of the modulator. Either single- or multi-layer films are used, depending on the switching capacity. Simple and difficult access magnetization axes are correspondingly marked with L and T. Winding 1 is the input winding. Field H_2, created by this winding, coincides with the direction of L. Output winding 2, which

Card 1/3 UDC: 681.142.52.2(04)

ACC NR: AT6034599

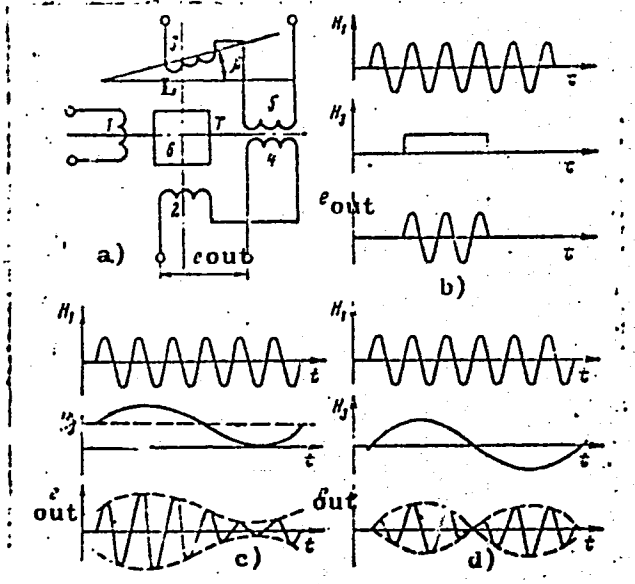


Fig. 1. Basic circuit diagram of the modulator

a - Modulator; b,c,d - diagrams of modulator signals.

Card 2/3

serves to remove the modulated signal, is placed orthogonally to input winding 1 in order to prevent coupling between them. Control winding 3 lies at an angle β to the direction of T. Compensating windings 4 and 5 are required to prevent coupling between output (2) and control (3) windings. When field H_3 is varied slowly these windings are not required. A preliminary investigation of the ferromagnetic thin-film modulator has yielded positive results. A winding version and a strip version of the modulator have been investigated. It is indicated that the proposed modulator can be used as an ordinary modulator, a pulsed modulator, a balancing modulator, a controlled coupling transformer, or as a video pulse switch. The temperature range in which the modulator can be operated is determined by the thin film. The film is capable of operation at temperatures ranging from -100 to +200 C. The modula-

ACC NR: AT6034599

tor, which can be operated in a wide frequency range, makes possible high-speed switching of hf signals. The maximum size of angle β is determined by the load, by the amplitude of the input and control fields, and by parameters of the ferromagnetic thin film. Orig. art. has: 8 formulas and 15 figures.

SUB CODE: 09/ SUBM DATE: none

Card 3/3

GOLUB, A.M.; SAMOYLENKO, V.M.

Potentiometric study of the composition and stability of ion solvates. Zhur. neorg. khim. 10 no.2:328-331 F '65.
(MIRA 18:11)

1. Kiyevskiy ordena Lenina gosudarstvennyy universitet imeni Shevchenko, kafedra organicheskoy khimii. Submitted Aug. 28, 1963.

SAMOYLENKO, V.M.

AUTHOR: Golub, A. M. and Samoylenko, V. M. 73-1-4/26

TITLE: Thiocyanate Complexes of Lead. I. Formation of the Simplest Complexes. (Rodanidnyye Kompleksy Svintsa. I. Obrazovaniye Prosteyshikh Kompleksov.)

PERIODICAL: Ukrainskiy Khimicheskiy Zhurnal, 1957, Vol.23, No.1, pp. 17 - 21 (USSR).

ABSTRACT: Thiocyanate compounds resemble halides in many ways, but can be investigated only with difficulty, in which sense they differ from lead halide complexes. The simpler thiocyanate complexes quoted in literature include $Pb(CNS)_2$, Pb(CNS)Cl and Pb(CNS)Br (viz. (1): Herty, C. H., and Boggs, T. R; J. Am. Chem. Soc. 1897, Vol. 19, 820.) It can be assumed that complex groups consisting of thiocyanate ions and lead ions must be formed in the ratio 1:1, 2:1, etc. as was shown by Golub, A. M. (Naukovi Zapiski KDY, Khim. Zbirnik, No.6, Vol.7, 1955). Investigations were carried out in the systems Pb^{2+}, CNS^- $-H_2O$. Experiments were carried out now in limits of concentrations of CNS-ions from 0.00548 to 0.1161-mol potentiometrically and spectrophotometrically. The existence of the complex groups $Pb(CNS)_2$ and $Pb(CNS)_5^{3-}$ was confirmed by measuring the optical density (graph 1). The $PbCNS^+$ and $Pb(CNS)_2$ groups were

Card 1/2

GOLUB, A.M.; ROMANENKO, L.I.; SAMOYLENKO, V.M.

Lead rhodanide complexes. Part 2: Composition and stability of anion complexes. Ukr.khim.zhur. 25 no.1:50-54 '59.
(MIRA 12:4)

1. Kiyevskiy gosudarstvenny universitet im. T.G. Shevchenko, kafedra neorganicheskoy khimii.
(Lead thiocyanate)

GOLUB, A.M.; SAMOYLENKO, V.M.

Thiocyanate complexes of indium. Ukr.khim. zhur. 29 no.5:472-479 '63. (MIRA 16:9)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.

L 12441-63 EWP(q)/EWT(m)/BDS AFFTC/ESD-3 RM/JD
ACCESSION NR: AP3002499 S/0073/63/029/006/0590/0600

AUTHOR: Golub, A. M.; Samoylenko, V. M.

TITLE: Effect of anhydrous solvents on the formation of thiocyanate complexes of indium (3)

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 6, 1963, 590-600

TOPIC TAGS: thiocyanate complexes indium (3), In(CNS)sup+ sub 2, In(CNS) sub 3, In(CNS)sub3 . 0.5CHsub3CN

ABSTRACT: Trivalent indium-thiocyanate-solvent systems containing 25, 50, 70 and 100 vol. % acetonitrile and dimethylformamide (DMF) were studied by electroconductivity and potentiometrically. In awueous DMF the complex changes from InCNS sup 2+ through In(CNS) sup + sub 2, In(CNS) sub 3 to In(CNS) sup 2- sub 5. This last complex changes in 50% and more of concentrated and anhydrous DMF into In(CNS) sup - sub 4. In the course of complex formation, the reaction of the ion-complex formers with molecules of solvent is more important than the effect of its dielectric constant. Increasing DMF concentration inhibits formation of more complicated complexes and aids solvation of the In ions. Dissociation

Card 1/2

L 12441-63
ACCESSION NR: AP3002499

constants for all complexes were calculated. In(CNS) sub 3 . 0.5CHsub3 CN, In(ClOsub4) sub 3 . 6 DMF and In(CNS) sub 3 . 3 DMF were synthesized. Orig. art. has: 10 tables and 6 figures.

ASSOCIATION: Kiyevskiy gosudarstvenny*y universitet im. T. G. Shevchenko (Kiev State University)

SUBMITTED: 07May62 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: none NO REF SOV: 012 OTHER: 005

Card 2/2

GOLUB, A.M.; SAMOYLENKO, V.M.

Effect of the nature of the solvent on the formation of thiocyanate complexes of tin (II). Ukr. khim. zhur. 29 no.8:789-797 '63. (MIRA 16:11)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.

GOLUB, A.M.; SAMOYLENKO, V.M.

Thiocyanate complexes of cadmium. Zhur.neorg.khim. 9 no.1:70-79 Ja '64. (MIRA 17:2)

SAMOYLENKO, V. N.

AUTHOR: Rapoport, M.B. and Samoylenko, V.N. 136-2-8/22

TITLE: Deformation of Aluminum - Bath Cathode Blocks in the Electrolysis Process. (Deformatsiya katodnykh blokov alyuminiyevykh vann v protsesse elektroliza)

PERIODICAL: Tsvetnyye Metally, 1957, No.2, pp. 44 - 51 (USSR)

ABSTRACT: As aluminum baths continue to increase in size the accurate determination of the deformation of carbonaceous materials under realistic conditions has become more urgent. Details are given of apparatus developed for this by the authors and experimental results obtained with it are presented. The method enables deformation of cathode blocks to be measured directly during electrolysis of cryolite - alumina melts and the authors suggest that such measurements can be used to evaluate the stability of carbon cathode blocks. The effects studied include impregnation with electrolyte, composition of block, the molar Na F/AlF, ratio in the electrolyte, additions to the electrolyte of CaF_2, temperature, current density, carbide formation and applied mechanical load. From the results obtained a more thorough appreciation of the interaction between cathode blocks and various components of the bath is reached. Besides tabulations the results are shown graphically as relative deformation time for different levels of the factors studied.

1/2

SAMOYLENKO, V. N., inzh.

Studying possibilities of using refractory concretes in constructing aluminum electrolyzers. Trudy NIIZHB no.6:177-196 '59. (MIRA 12:10)

(Concrete--Testing)
(Electrolysis--Equipment and supplies)

SAMOYLENKO, V.N.

Elastic plastic properties of carbon blocks. Ogneupory 25 no.4:181-183 '60. (MIRA 13:8)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR.
(Metallurgical furnaces) (Firebrick—Testing)

SAMOYLENKO, V.N.

Portable indicator for measuring deformations at high temperatures.
Izm.tekh. no.10:31 O'60. (MIRA 13:10)
(Strain gauges)

NEKRASOV, K.D.; SAMOYLENKO, V.H.

Use of heat-resistant concrete for cathodic arrangements in aluminum electrolytic cells. Izv. vys. ucheb. zav.; tsvet. met. 3 no. 6:74-79 '60. (MIRA 14:1)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR.
(Aluminum--Electrometallurgy)
(Electrolysis--Equipment and supplies)

SAMOYLENKO, V. N.

Cand Tech Sci - (diss) "Study of the performance of the cathode installation in electrolytic baths for producing aluminum." Leningrad, 1961. 19 pp; (Main Scientific Research Inst under the State Economic Council USSR, All-Union Aluminum-Magnesium Inst "VAMI"); 150 copies; price not given; list of author's works on p 19 (11 entries); (KL, 6-61 sup, 225)

SAMOYLENKO, V.N.

Studying the performance of cell casings in aluminum electrolysis. TSvet. met. 33 no.6:54-60 Je '60. (MIRA 14:4)

1. Naucimo-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR.
(Aluminum--Electrometallurgy)

RAPOPORT, M.B.; SAMOYLENKO, V.N.; MAL'TSEVA, I.M.

Effect of physicochemical processes taking place in the carbon lining of an electrolytic cell, on the deformation of the cathode casing. Izv. vys. ucheb. zav.; tsvet. met. 5 no.2:81-87 '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy alyuminiyevo-magniyevyy institut.

(Aluminum--Electrometallurgy)
(Electrolysis--Equipment and supplies)

SAMOYLENKO, V.N.; TSYPLAKOV, A.M.

Improving the design of coal-lined aluminum bottoms electrolytic cells. TSvet. met. 38 no.6:45-49 Je '65. (MIRA 18:10)

SAMOYLENKO, V.P.

Introduction of a semi-continuous production system in small capacity liquor plants. Spirt.prom. 20 no.3:29 '54.(MLRA 7:10)
(White Russia--Liquor industry) (Liquor industry--White Russia)

L 20019-65 EWT(d)/EWP(1) Po-4/Pq-4/Pg-4/Pk-4/P1-4 IJP(c)/AEDC(a)/
ASD(a)-5/AFD(s)/AFMDC/AFETR/RAEM(d)/ESD(dp) BC
ACCESSION NR: AR4044799 S/0271/64/000/006/A029/A029

SOURCE: Ref. zh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika. 13
Svodny*y tom, Abs. 6A182

AUTHOR: Grishchuk, V. P.; Samoylenko, V. P.; Boldy*reva, D. F.

TITLE: Determining the parameters for setting an intermittent-control system in the case of linear disturbance

CITED SOURCE: Sb. Tekhn. kibernetika. Kiyev, Gostekhizdat USSR, 1963, 69-80

TOPIC TAGS: automatic control, automatic control theory

TRANSLATION: When the error introduced by self-oscillations in the system can be neglected, the maximum deviation of the controlled variable from its steady-state preset value serves as a measure of accuracy of the control process. This condition is satisfied when the external disturbance is fairly slow and can be regarded, within a small interval, as a linear function of time. The accuracy is assessed of an automatic control system which encompasses a first-kind plant with a delay and a discrete controller represented by a second-kind pulse element. The control-

Card 1/2

L 20019-65
ACCESSION NR: AR4044799

system dynamics is investigated by the method of difference equations. It is noted that the controlled variable takes on a maximum value at the time moments determined by an integer number of periods plus the delay time. The maximum deviation is evaluated; it depends on the settings of the controller and the pulse element. The controlled-variable minimum equals to the average value of the same parameters; the swing of oscillations depends only on the control period. Stability of the automatic control system is analyzed, and stability limits in the parametric plane are determined on the basis of a modified Raus-Hurwitz criterion. Optimum setting parameters (in the sense of minimum deviation of the controlled variable from its preset value) are determined. An additional case is considered when the derivative-type correction is absent. Dynamic errors in discrete and continuous analog systems are compared; with a small relative delay, the discrete system is found to provide better accuracy than a structurally similar analog system. Six illustrations. Bibliography: 2 titles.

SUB CODE: DP, IE ENCL: 00

Card 2/2

L 23616-66 EWT(1)/FCC GW

ACC NR: AP6009539 (A,N) SOURCE CODE: UR/0413/66/000/005/0075/0075

29
B

AUTHOR: Samoylenko, V. P.; Korolev, V. D.

ORG: none

TITLE: A magnetosensitive system for a magnetometer. Class 42, No. 179484 [announced by the Special Design Bureau of the State Geological Committee, SSSR (Osoboye konstruktorskoye byuro Gosudarstvennogo geologicheskogo komiteta SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 75

TOPIC TAGS: magnetometer, magnetic field intensity

ABSTRACT: This Author's Certificate introduces a magnetosensitive system for a magnetometer. The unit contains a permanent indicator magnet mounted on tension wires. The frequency range of measurable variations is expanded by making the indicator magnet from a highly coercive barium ferrite in the form of a parallelepiped with the long axis parallel to the filament. The length of the edge parallel to the filament is at least twice as long as the axis of magnetization.

SUB CODE: 08/4/ SUBM DATE: 02Jan64/ ORIG REF: 000/ OTH REF: 000

UDC: 550.380.8

Card 1/1

SAMOYLENKO, V. S.

"Methods of Perception of the Climate of Seas and Oceans", Report State Institute of Oceanography, No 49. Hydrometeorological Press, Leningrad-Moscow; 1946, 9 pp. (Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

SAMOYLENKO, V. S.
The Immediate Future of the Sea of Azov.
Works of the GOIN, No 3 (15). 1947 (43-99)

Rpt U 2392, 22 Sept 52,

SAMOYLENKO, V.S.

Averkiyev, M. S.

"Meteorological Manual." I.I. Gayvoronskiy, M.S. Averkiyev. Reviewed by V.S. Samoy lenko. Met. i. gidrol., No. 5, 1949.

Monthly List of Russian Accessions, Library of Congress, October, 1952. UNCLASSIFIED.

SAMOYLENKO, V. S.

5

2

3.6-154

Samoilenko, V. S., A. A. Borisov. Klimatologiia. [Review: Climatology by A. A. Borisov.] *Meteorologiia i Gidrologiia*, No. 1:79-80, Sept. 1950. DLC—A severe criticism of the manual. After having announced that the book does not contain any original idea on the subject, that it is nothing more than a disorderly mixture of extracts from other works on climatology and that it is difficult to find in some chapters a page without crude errors, discrepancies or a collection of obscure and empty phrases—the reviewer proceeds to give examples as proof. The questions of climate, climatology and climatic analysis of meteorological observations and data of cloudiness, humidity, temperature and wind variations are specially criticized and errors pointed out. Descriptions of climate of individual zones and regions when described only but not commented on by the author are the only correct parts of the book. In conclusion, the reviewer expresses his bewilderment that this sort of "scientific work" could have been adopted by order of the Council of Ministers of the U.S.S.R. as a manual for schools which train specialists for the State Hydrometeorological Service. *Subject Headings:* 1. Climatology 2. Critical reviews. I. Borisov, A. A.—*A.M.S.*

551.58

SAMOYLENKO, V.S.

Modern theory of oceanic evaporation and its practical application. (MIRA 11:3)
Trudy GOIN no.21:3-31 '52.
(Oceanography) (Evaporation)

AVERKIYEV, M.S. [author]; ULANOV, Kh.K. [reviewer]; SAMOYLENKOV, V.S. [redaktor].

"Meteorology." M.S.Averkiev. Reviewed by Kh.K.Ulanov. Vest.Mosk.un. 8 no.5:139-140 My '53. (MLRA 6:8)

1. Rizhskaya Geofizicheskaya observatoriya (for Ulanov).
(Meteorology) (Averkiev, M.S.)

SAMOYLENKO, V.S.

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P.; BUCHINSKIY, I.Ye.; SEYANINOV, G.T., professor; BOSHNO, L.V.; ALISOV, B.P.; BIRYUKOV, N.N.; GAL'TSOV, A.P.; GRIGOR'YEV, A.A., akademik; EYGENSON, M.S., professor; MURETOV, N.S.; KHROMOV, S.P.; BOGDANOV, P.N.; LEBEDEV, A.N.; SOKOLOV, V.N.; YANISHEVSKIY, Yu.D.; SAMOYLENKO, V.S.; USMANOV, R.F.; CHUBUKOV, L.A.; TROTSENKO, S.Ya.; VANGENGEYM, G.Ya.; SOKOLOV, I.F.; STYRO, B.I.; TEMNIKOVA, N.S.; ISAYEV, E.A.; DMITRIYEV, A.A.; MALYUGIN, Ye.A.; LIEDEMAA, Ye.K.; SAPOZHNIKOVA, S.A.; RAKIPOVA, L.R.; POKROVSKAYA, T.V.; BAGDASARYAN, A.B.; ORLOVA, V.V.; RUBINSHTEYN, Ye.S., professor; MILEVSKIY, V.Yu.; SHCHERBAKOVA, Ye.Ya.; BOCHKOV, A.P.; ANAPOL'SKAYA, L.Ye.; DUNAYEVA, A.V.; UTESHEV, A.S.; RUDNEVA, A.V.; RUDENKO, A.I.; ZOLOTAREV, M.A.; NERSESYAN, A.G.; MIKHAYLOV, A.N.; GAVRILOV, V.A.; TSOMAYA, T.I.; DEVYATKOVA, A.M.; ZAVARINA, M.V.; SHMETER, S.M.; BUDYKO, M.I., professor.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor.GUGMS no.3/4:26-154 '54. (MIRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Fedorov). 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voeykova (for Predtechenskiy, Lebedev, Yanishevskiy, Isayev, Rakipova, Pokrovskaya, Orlova, Rubinshteyn, Budyko, Shcherbakova, Anapol'skaya, Dunayeva, Rudneva, Gavrilov, Zavarina). 3. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Buchinskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor. GUGMS no.3/4:26-154 '54. (Card 2) (MIRA 8:3)

4. Vsesoyuznyy institut rastenievodstva (for Selyaninov, Rudenko). 5. Bioklimaticheskaya stantsiya Kislovodsk (for Boshno). 6. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Alisov). 7. Ministerstvo putey soobshcheniya SSSR (for Biryukov). 8. Institut geografii Akademii nauk SSSR (for Gal'tsov, Grigor'yev). 9. Geofizicheskaya komissiya Vsesoyuznogo geograficheskogo obshchestva (for Eygenson). 10. Ministerstvo elektrostantsiy i elektropromyshlennosti SSSR (for Muretov). 11. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova (for Khromov). 12. TSentral'nyy nauchno-issledovatel'skiy gidrometeorologicheskiy arkhiv (for Sokolov, Zolotarev). 13. Gosudarstvennyy okeanograficheskiy institut (for Semerlenko). 14. TSentral'nyy institut prognozov (for Usmanov, Sapozhnikova). 15. Institut geografii Akademii nauk SSSR i TSentral'nyy institut kurortologii (for Chubukov). 16. Nauchno-issledovatel'skiy institut imeni Sechenova, Yalta (for Trotsenko). 17. Arkticheskiy nauchno-issledovatel'skiy institut (for Vangengeym).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state of climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 3) (MLRA 8:3)

18. Dal'nevostochnyy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Sokolov). 19. Institut geologii i geografii Akademii nauk Litovskoy SSR (for Styro). 20. Rostovskoe upravlenie gidrometsluzhby (for Temnikova). 21. Morskoy gidrofizicheskiy Institut Akademii nauk SSSR (for Dmitriyev). 22. Vsesoyuznyy institut rasteniyevodstva (for Malyugin). 23. Akademiya nauk Estonskoy SSR (for Liedemaa). 24. Akademiya nauk Armyanskoy SSR (for Bagdasaryan). 25. Leningradskiy gidrometeorologicheskiy institut (for Milevskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 4) (MIRA 8:3)

26. Gosudarstvennyy gidrologicheskiy institut (for Bochkov). 27. Kazakhskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Utoshev). 28. Upravlenie gidrometsluzhby Armyanskoy SSR (for Nersesyan). 29. Leningradskoye upravleniye gidrometsluzhby (for Mikhaylov, Devyatkova). 30. Tbilisskiy gosudarstvennyy universitet (for Tsomaya). 31. TSentral'naya aerologicheskaya observatoriya (for Shmeter).
(Climatology)

SOV/169-59-7-7098

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 7, p 90 (USSR)

AUTHOR: Samoylenko, V.S.

TITLE: Problems and Methods of Evaluating Hydrometeorological Observations From Ships by Means of Computing Machines

PERIODICAL: Tr. N.-i. in-ta aeroklimatol., 1958, Nr 5, pp 51 - 79

ABSTRACT: The experience of machine processing of hydrometeorological observations made from ships is generalized; the processing has been carried out during the last 10 years by the Scientific Research Institute of Aeroclimatology by means of mechanized index cards of the standard type approved by the Main Administrations of the Hydrometeorological Service. Having shown the function of the mechanized index cards and the general character of the materials relating to their compilation, the author lists the complexes of the meteorological and hydrological elements representing the content of the index cards. The following elements are contained in them: 1) the velocity of wind; 2) the direction of wind; 3) the pressure of the

Card 1/3

Problems and Methods of Evaluating Hydrometeorological Observations From Ships by Means of Computing Machines

atmosphere; 4) the temperature of the air; 5) the absolute and relative humidity; 6) the forms of the clouds; 7) the quantity of clouds; 8) the atmospheric precipitations; 9) the fogs; 10) the visibility and the optical phenomena; 11) the characteristic of the present weather; 12) the temperature of water; 13) the undulation (its type, force, direction); 14) the elements of undulation; 15) the ice conditions. Moreover, the card index must comprise a series of distinctive elements determining the time and place of observations and the conditions, under which each observation has been carried out. The characteristics of the listed elements, ciphered in the form of definite figures, are inserted into the punched cards, the model of which has been shown, adding the corresponding instructional notes. All registrations from observations are carried out in note-books having definite form, and the perforation is brought about directly according to these note-books. Simultaneously, the tabulation of the informations noted in the punched cards is carried out by special machines, for obtaining controlling course tabulagrams. The latter represent a printed course catalogue of all observations

Problems and Methods of Evaluating Hydrometeorological Observations From Ships by Means of Computing Machines

performed in the place in question, and moreover, they are employed for the checking of the correctness of performance of the index card. Moreover, the compiled card index is subjected to sorting over map squares and over months by means of a sorting machine, and thereupon, tabulagrams of map squares are plotted, an example of which is shown in the appendix. The tabulagram is used for the second control of the exactness of the compiled card index, which is carried out according to the method mentioned. The main mechanized processing concludes with the computation of the average distinctive and hydrometeorological characteristics for each square and supplementary estimation of the reliability of the results obtained by means of the card index file. The compilation and control of the card index file, which must be performed by hand with efficiency of 1,000 - 2,000 punched cards per day, represent the most labor-consuming work. Any analysis, which is to be done on the basis of the ready card index file can be performed by automatic machines of high capacity. Climatic and hydrologic atlases of the seas represent the final result of the processing of ship observations. The map of the temperature of air in November for the Aral Sea is added as an exemplary one. The further aspects of the application of mechanized index card files of ship observations are pointed out. M.I. Gol'tsman

Card 3/3

SAMOYLENKO, V.S.; BAGROV, N.A., kand.fiz.-matem.nauk, red.; GORYUSHKIN, M.N., red.; ZEMTSOVA, T.Ye., tekhn.red.

[Formation of the temperature regimen in seas] Formirovanie temperaturnogo rezhima morei. Pod red. N.A.Bagrova. Moskva, Gidrometeor.izd-vo, 1959. 144 p. (MIRA 13:1)
(Ocean temperature)

SAMOYLENKO, V. S.

60

3 (3), 3 (7)

AUTHORS: Kondrat'yev, K. Ya., Rozenberg, G. V. SOV/53-6...

TITLE: Conference on Actinometry and Atmospheric Optics (Soveshchaniye po aktinometrii i atmosfernoy opti...)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 68, # pp 345-358 (USSR)

ABSTRACT: The conference on actinometry and ... spheric optics, that had been organized by the Commit... of Atmospheric Optics of the OFMN AS USSR, by the Len...grad University and the Glavnaya geofizicheskaya obser...toriya (Geophysical Main Observatory) was held in Len...grad from January 28 to February 4, 1959. Preparat...y work was made by a subcommittee for radiation of the Commit...e of ... hysics of the Atmosphere, to which belon...: K. Ya. Kondrat'yev (Chairman, LGU Leningrad), G. V. Ro... (Vice President IPA AS USSR, Moscow), V. G. Kastrov (T... Moscow), Ye. V. Pyaskovskaya-Fesenkova (Astrofiz. in-t ...strophysics Institute, KazakhSSR, Alma-Ata), G. ...alakvelidze (Elbrus Expedition of the IPG AS USSR, Nal...), K. S. Shifrin (GGO, Leningrad), Yu. D. Yanishevskiy (G... ...grad). The conference was attended by 325 deleg...s from 33 cities, astronomical

Card 1/11

observatories and ac...nometric stations. Other delegates had been sent by China, ...oland, East Germany, Czechoslovakia, Bulgaria and Korea ... 92 lectures were delivered, which may be classified in th... following groups with respect to their subjects: 1) Radia... equilibrium and its composition, 2) Brightness and ...larization of daytime- and crepuscular sky, 3) Atmosphe... transparency, 4) Investigation of the atmospheric ae... by optical methods, 5) Reflecting capability of ...er strata, 6) .... The conference was opened by the ...rman of the Committee of Atmospheric Physics, A. M. Obukho... ...rresponding Member, AS USSR. K. Ya. Kondrat'yev ..., Leningrad) held an introductory speech on results and ...aspects of development in actinometry and atmospheric optics. G. V. Rozenberg (IPA, AS USSR, Moscow) spoke on the development of atmospheric optics and Yu. D. Yanishevskiy (GGO, Leningrad) on the actinometric network of the USSR and the IGY. S. I. Sivkov (GGO, Leningrad) spoke on actinoclimatology, L. G. Makhotkin (GGO, Leningrad) on the systematic arrangement of data in actinometry and P. A. Vorontsov and T. V. Kirillova (GGO, Leningrad) on the connection of radiation equilibrium with the stratification

Card 2/11

of the earth-near stratum. Further lectures were delivered by: Ye. P. Barashkova (GGO, Leningrad) on rules governing the radiation conditions, L. I. Sakali (OMI, Odessa) on radiation equilibrium in the lower strata over land and sea, K. Ya. Kondrat'yev and M. P. Manolova (LGU, Leningrad) on the radiation equilibrium in slopes, P. Zakrilayev (Tashkent) on the development of actinometry and atmospheric optics in Central Asia, A. I. Kartsivadze (Institut geofiziki AN GruzSSR - Institute of Geophysics of AS GruzSSR, Tbilisi) on the determination of the angle of incidence of sun beams on inclined planes, Sh. M. Chkhaidze (Abastumanskaya astrofiz. obs. - Abastumani Astrophysical Observatory) on astrophysical observations made in this observatory, T. G. Berlyand (GGO, Leningrad) on the propagation of sun radiation over the globe, Ye. P. Barashkova, V. L. Gayevskiy and Z. I. Pivovarova (GGO, Leningrad) on radiation conditions in the European part of the USSR, and N. A. Yefimova (GGO, Leningrad) on the application of climatological methods of calculating the effective total radiation, and utilization of data from 68 actinometric stations of the USSR. B. M. Gal'perin (LGMI, Leningrad) spoke of the influence exerted by an overcast

Card 3/11

upon the thermal irradiation of atmosphere and R. Ye. Borichevskiy (Agrometstantsiya, Omsk) on the work carried out by this station; A. I. Popov (Sel'skokhoz. in-t, - Agricultural Institute, Krasnoyarsk) spoke of the total and scattered radiation in the Krasnoyarskiy kray, V. V. Mikhenberg and T. A. Ognova (GGO, Leningrad) reported on local radiation investigations (Crimea). S. I. Sivkov (GGO, Leningrad) spoke about actinometry in agriculture and N. P. Rusin (GGO, Leningrad) spoke about investigations of radiation equilibrium made by the Soviet Antarctic Expedition. V. N. Bogoslovskiy (MISI, Moscow) reported on thermophysical and glacial-actinometric investigations in the Antarctic 1957-1958 and N. T. Chernigovskiy (AHII, Leningrad) as well as M. K. Gavrilova (Yakutsk), B. M. Gal'perin (LGU, Leningrad), T. V. Kirillova (GGO, Leningrad) and M. S. Marshunova (AHII, Leningrad) likewise reported on actinometric and climatological investigations in the Antarctic. V. S. Samoylenko (NII aeroklimatologii - Scientific Research Institute of Aeroclimatology, Moscow) reported on investigations of the radiation thermal conductivity in the sea and the atmosphere, and together with A. I. Sirotkina on

Card 4/11

problems of solar irradiation and water temperature in the Aral and Caspian Sea. A number of lectures on the sun... radiation and construction engineering was introduced ... A. U. Franchuk (In-t stroitel'stva i arkhitektury ... Minsk - Institute of Construction Engineering and Architecture, AS BSSR, Minsk) with a lecture on the influence of solar radiation upon the external surfaces of buildings. Further lectures were delivered by: B. P. Vasil'yev (NII zhilishcha AS i A SSSR, Moscow) on the role played by the reflected radiation in the southern regions of the USSR, B. A. Dunayev on the consideration of radiation when projecting buildings, as well as Ye. Yu. Brarmina, A. N. Borshchovskiy (NII-ZCC, Moscow) likewise on architectural problems in connection with radiation. The following reports dealt with problems of actinometric measurement: Yu. D. Yanishevskiy (GGO, Leningrad) on construction principles of Soviet and foreign actinometric instruments, and on the compensation pyrheliometer and its application. E. L. Podol'skaya (LGU, Leningrad) on the theory of the balansometer, Yu. K. Ross (In-t fiziki i astron. AS ESSR, Tartu - Institute of Physics and Astronomy of the AS ESSR, Tartu) spoke of the application of electronic

Card 5/11

potentiometers in actinometry and V. I. (Mamayenko IFA AS USSR, Moscow) on the application of the instrument EPP-09 for radiation recording, F. Zakrilayev (Sredneaz. politekhn. in-t, - (Soviet) Central Asiatic Polytechnic Institute, Tashkent) on temperature coefficients of actinometric instruments, R. Ye. Borichevskiy (Agrometstantsiya, Omsk) on new apparatus, observation methods and utilization of materials in the Omsk agrometstantsiya. Other lectures were delivered by: D. L. Grishchenko on methods of maritime actinometric observations, Ye. V. Pyaskovskaya-Fesenkova (Alma-Ata) on visual observations of polarization of the day-light in the Libyan Desert and D. G. Stamov (Krymsk. pedagogich. in-t - Crimea Pedagogical Institute, Simferopol') on the polarimetric determination of the moisture of atmosphere in different directions. S. I. Sivkov (GGO, Leningrad) reported on depolarization phenomena of light in the atmosphere, Yu. N. Lipskiy (GAISh MGU, Moscow) on the spectral polarization of the day- and crepuscular sky, N. K. Turikova, A. Ya. Driving, G. V. Rozenberg (IFA AS USSR, Moscow) reported on photoelectric investigations of the brightness

Card 6/11

Conference on Actinometry and Atmospheric Optics SOV/53-68-2-6/7

of day- and crepuscular sky in the Northern Caucasus and on the Crimea; T. G. Megrelishvili (Abastuman Astrophysical Observatory) reported on investigations of optical properties of the earth atmosphere in crepuscle. G. V. Rozenberg spoke of the "Anatomy of Sunset", A. D. Zamorskiy (Leningrad) of the physical nature of the phenomena in the pink-red (purple) sky at sunset, M. M. Fedorov (Pedagogich. in-t - Pedagogical Institute, Zaporozh'ye) on illumination and density of damp in the Zaporozh'ye region, V. V. Sharonov (LGU, Leningrad) on the determination of light constants of the sun and the moon, T. P. Toropova (Alma-Ata) on factors of light reduction in the atmosphere, N. V. Zolotavina (IFA AS USSR) on measurements of the transparency of the atmosphere, M. V. Dolidze (Abastuman Astrophysical Observatory) on measurements of spectral transparency on the mountain Kanobili. Further lectures dealt with the altitude dependence of transparency: V. G. Kastrov (TsAO, Moscow) spoke about the pyranometric determinations of the sunlight absorption in the atmosphere. G. P. Faraponova (TsAO, Moscow) on light reduction in the free atmosphere, Yu. I. Rabinovich (GGO, Leningrad) on the

Card 7/11

vertical distribution of the reduction coefficient in the lower troposphere, G. P. Gushchina (GGO, Leningrad) on the irradiation of atmospheric aerosols. V. I. Kyukhkyur'ye on the light reduction by aerosols at different altitudes. Ye. V. Pyaskovskaya-Fesenkova (Alma-Ata) on the determination of transparency coefficients from the brightness of the sky, N. I. Nikitinskaya (Lesotekhnicheskaya Akademiya - Technical Academy for Forestry, Leningrad) on determinations of the spectral transparency of the atmosphere, Ye. A. Polyakova (GGO, Leningrad) on the horizontal transparency in a precipitation zone, O. I. Popov (GOI, Leningrad) on the photoelectric recording instrument GOI (FM-45), A. M. Brounshteyn (GGO, Leningrad) on methods and measuring results concerning the function of the passage of longwave radiation, V. A. Zuyev on the horizontal transparency of the atmosphere for infrared, A. L. Osherovich (LGU, Leningrad) on parameters of modern photomultipliers and photocells, A. P. Andreyev and O. P. Shelkova (In-t biofiziki AN SSSR - Institute of Biophysics of the AS USSR, Moscow) dealt with an instrument devised by them for the measurement of natural UV-radiation, N. F. Galanin (In-t radiats. gigiyeny -

Card 8/11

Institute of Radiation Hygiene, Leningrad) on the effect of UV-radiation on the human organism, A. N. Boyko (VNII M, Leningrad) on the UV-radiation of the sun as a climatic factor, N. A. Lebedev (Crimea Pedagogical Institute, Simferopol') on observations of the solar UV-radiation on the Crimea. Problems of atmospheric aerosols were dealt with by K. S. Shifrin and V. F. Raskin (GGO, Leningrad), O. D. Barteneva (GGO, Leningrad), T. P. Toropova (Alma-Ata), R. A. Charanov (TsAO, Moscow), G. V. Rozenberg, N. D. Rudometkina and I. M. Mikhaylin (IFA AS USSR, Moscow); reports chiefly dealt with investigations of the scattering indicatrix and its components. N. V. Zolotavina, A. Ya. Driving and G. V. Rozenberg (IFA AS USSR, Moscow) spoke about atmospheric sounding, A. Ya. Driving (IFA AS USSR) on clouds in the stratosphere according to sounding data, B. I. Styro (In-t geologii i geografii AN Litovskoy SSR - Institute of Geology and Geography, AS Lithuanian SSR) on the distribution of radioactive aerosols in the free atmosphere, L. B. Krasil'shchikov (GGO, Leningrad) on measurements of brightness coefficients under laboratory conditions and in the open air, K. S. Lyalikov (Labor. aerometodov AN SSSR - Laboratory for

Card 9/11

Aeromethods of the AS USSR, Leningrad) on investigations of the spectral brightness, V. I. Matulevichene (Gos. universitet, Vil'nyus - State University, Vilna) on albedo-measurements and computations, N. Ye. Ter-Markaryants (GGO, Leningrad) on radiation reflection by the sea, K. Ya. Kondrat'yev, Z. F. Mironova and L. V. Dayeva on the spectral albedo of snow, Kh. G. Tooming (Tartu, on the course of the surface albedo during one day and N. I. Goysa (Ukr. NIGMI, Kiyev) on albedo measurements of large territories by the aid of an airoplane. Other lectures were devoted to problems of the radiation transfer in the atmosphere. Lecturers were: K. Ya. Kondrat'yev (LGU, Leningrad) on approximation equations for the radiation energy transfer, Ye. M. Feygel'son (IFA AS USSR, Moscow) on temperature changes in a cloud with time, A. M. Samson (In-t fiziki i matematiki AN BSSR - Institute of Physics and Mathematics AS BSSR, Minsk) on the transfer of resonance radiation in a plane-parallel stratum, I. N. Minin (LETI, Leningrad) on a radiation transfer equation under consideration of refraction, G. V. Rozenberg (IFA AS USSR, Moscow) on light conditions in the depth of a scattering medium, S. G. Slyusarev (LGMI, Leningrad) on the

radiation field in the depth of a turbid medium, M. S. Malkevich (IFA AS USSR, Moscow) on results given by an approximation method devised by him for the consideration of the horizontal albedo change of the ground surface in the problem of light propagation in the atmosphere with a spherical scattering indicatrix, S. D. Gutshabash (LGU, Leningrad) on light scattering in a medium adjacent to a reflecting surface, V. A. Atroshenko (IFA AS USSR, Moscow) on evaluations of the accuracy of the transfer equation solution according to the method by V. V. Sobolev and O. A. Avaste (In-t fiz. i astron. AN ESSR, Tartu - Institute of Physics and Astronomy of the AS ESSR, Tartu) concerning the accuracy of an approximation method for the calculation of the brightness in atmospheric fog (Sobolev method). The next conference of this kind is to be held in Vilna in 1960.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446930013-0"

SAMOYLENKO, V.S.

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

AGAPOVA, G. V., BUDANOVA, L. Y., ZATONSKIY, L. K., ZENKEVICH, N. L., IVANOV, A. G., LARINA, N. I., MAROVA, N. A., and UDINTSEV, G. B., All from the Institute of Oceanology, Academy of Sciences USSR - "The bottom relief of the Pacific Ocean and its cartographic representation" (Section VI.A)

ANDRIYASHEV, A. P., Institute of Zoology, Academy of Sciences USSR - "Myctophid fishes of the Antarctic and the problem of their bipolar distribution in the Pacific Ocean" (Section III.C)

ANDRUSHCHENKO, P. F., and SKORNYAKOVA, N. S., Institute of Oceanology - "The manganese concretions of the Pacific Ocean" (Section VII.C.1)

APH----YEV, G. D. (Name blurred, but may be AFANAS'YEV, G. D.), Institute of Geology of Ore Deposits, Petrography, Mineralogy, and Geochemistry - (Title of paper is blurred; following is approximate title) - "Makhoyevishich's discontinuty [sic] layer and petrographic data" (Section VII.C)

BALAKINA, L. M., Institute of Earth Physics imeni O. Yu. Schmidt - "The character of stresses and ruptures in the earthquake foci of the Pacific seismic zone" (Section VII.C.2)

BARSUKOV BARKUGOV, V. V., Institute of Zoology, "On the Pacific origin of the Anarhichadidae family" (Section III.C)

BATALIN, A. M., Yakutsk State University - "On the heat processes in the waters of the Far East (Section VII.B)

BEKLEMISHEV, K. V., Institute of Oceanology - "On the transformation of the plankton of the Pacific drift and in the adjacent waters" (Section III.C)

BELOUSOV, V. V., and RUDICH, Ye. N., Institute of Earth Physics imeni O. Yu. Schmidt - "Genesis and age of the abyssal depression of the sea of Japan" (Section VII.C.2)

BELYAYEV, G. M., Institute of Oceanology - "Accumulations of squid beaks and shark teeth at the ocean floor" (Section III.C)

BEZRUKOV, P. L., Institute of Oceanology - "Recent sedimentation and the geological history of the Okhotsk sea" (Section VII.C.1)

BEZRUKOV, P. L., LISITSYN, A. P., PETELIN, V. P., and SKORNYAKOVA, N. S., Institute of Oceanology - "Recent sediments of the Pacific" (Section VII.C.1)

BIRSHTEYN, Ya. A., and VINOGRADOV, M. Ye., Institute of Oceanology - "Some specific features in the geographical distribution of abyssal pelagic animals (Amphipoda)" (Section III.C)

BOGDANOV, S. T., Institute of Oceanology - "New charts of cotidal lines and the character of tidal phenomena in the Pacific Ocean" (Section VII.B) ✓

BOGOROV, V. G., BEKLEMISHEV, K. V., and VINOGRADOV, M. Ye., Institute of Oceanology - "The distribution of the zooplankton biomass in the Pacific Ocean" (Section III.C)

BORDOVSKIY, O. K., Institute of Geology Exploitation of Combustible Materials - "The diagenetic changes in bottom sediments from the central part of the Pacific"(Section VII.C.1)

BRODSKAYA, N. G., Institute of Geology - "Sedimentation and the regularities in the distribution of mineral resources in the geosynclinal basins of the Tertiary period in the area of Kamchatka and the Sakhalin Island" (Section VII.C)

BRUYEVICH, S. V., and ZAYTSEVA, Ye. D., Institute of Oceanology - "Some chemical features of sediments and ground solutions permeating the latter in the Pacific (materials of the northwestern part)" (Section VII.C.1)

BURKOV, V. A., Institute of Oceanology - "A study of equatorial currents in the western Pacific" (Section VII.B)

BURLUTSKAYA, V. M., and SAMOYLENKO, V. S., Institute of Oceanology - "The formation of air masses in the northern part of the Pacific Ocean" (Section VII.A)

BURMISTROVA, V. D., Institute of Oceanology - "The regions of formation and transition courses of anti-cyclons in the northern part of the Pacific Ocean (Section VII.A)

SAMOYLENKO, V. S., Institute of Oceanology - "Problems concerned with the theory of formation of the temperature regime in seas and oceans" (Section VII.A)

S/169/62/000/004/027/103
D228/D302

AUTHORS: Samoylenko, V. S. and Sirotkina, A. I.

TITLE: Insolation and water temperature in the Caspian and the Aral Seas (Theses)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 17, abstract 4B122 (V sb. Aktinometriya i atmosfern. optika, L., Gidrometeoizdat, 1961, 92-93)

TEXT: Monthly maps of the summary solar-radiation distribution and the water-temperature distribution were obtained on the basis of the processing of the results of multi-yearly meteorologic and actinometric observations. For both the Caspian and the Aral Seas the maximum radiation totals during most of the year occur in south-eastern and eastern areas. Analysis of the maps showed that the disposition of the average yearly isotherms does not coincide with the disposition of the solar radiation isolines. [Abstracter's note: Complete translation.]

Card 1/1

BURLUTSKAYA, V.M.; SAMOYLENKO, V.S.

Conditions governing the formation of air masses in the northern part of the Pacific Ocean. Trudy Inst. okean. 57: 93-116 '62. (MIRA 16:10)

SAMOYLENKO, V. S.,

"Structure of the trade-wind circulation in the Pacific Ocean"

Report to be submitted for the 13th General Assembly, Intl. Union of Geodesy and Geophysics (IUGG), Berkeley Calif., 19-31 Aug 63

SAMOYLENKO, V.S.

Methods of estimating advection in the heat balance of seas and oceans. Trudy Inst. okean. 66:46-58 '63. (MIRA 16:10)

NAZAROVA, Irina Varfolomeyevna; SAMOYLENKO, V.S., otv. red.; SLABKOVICH, G.I., red.

[Effect of wind air temperature in the European part of the U.S.S.R.] Vliianie vetra na temperaturu vozdukha Evropeiskoi chasti SSSR. Leningrad, Gidrometeoizdat, 1964. 125 p. (MIRA 17:8)

L 21418-65 EWT(1)/EWG(v) Pe-5/Pae-2 AEDC(a)/AFETR GW
ACCESSION NR: AP5001541 S/0213/64/000/006/0997/1007

AUTHOR: Samoylenko, V. S.

TITLE: Will a natural ice cap be restored in the Arctic basin in case the present one is destroyed?

SOURCE: Okeanologiya, no. 6, 1964, 997-1007

TOPIC TAGS: glacier, heat balance, ocean, atmosphere

ABSTRACT: The author considers the thermal balance in the surface water of the sea and the lower layer of the atmosphere, taking into account the conversion factors and heat advection. He then analyzes the present-day heat balance and computes future mean annual temperatures. Temperature extremes are evaluated, and it is concluded that a natural ice cap will not be restored in the Arctic basin, should the present one be destroyed, if the advective flow of heat into the basin is held at half the current value, i.e., if the flow is 0.025 cal/cm^2 min or more. A continuous year-round ice cap will certainly form if the advection of heat falls below this figure. It might be thought that computations could be made to indicate whether advection would or would not fall below the critical level indicated, but the author states that no method is available to make detailed computations leading

Card 1/2

L 21418-65
ACCESSION NR: AP5001541

to this knowledge, as the factors affecting heat advection are impossible to predict satisfactorily. Orig. art. has: 1 figure, 2 tables, and 6 formulas.

ASSOCIATION: Institut okeanologii AN SSSR (Institute of Oceanography AN SSSR)

SUBMITTED: 00 ENCL: 00

SUB CODE: ES NR REF SOV: 010 OTHER: 000

Card 2/2

SAMOYLENKO, V.S.

Will the natural ice cover in the Arctic basin be restored in case of its destruction? Okeanologiia 4 no.6:997-1007 '64. (MIRA 18:2)

1. Institut okeanologii AN SSSR.

L 38676-66 EWT(1) GW
ACC NR: AT6012602 (N) SOURCE CODE: UR/2566/65/078/000/0128/0153

AUTHOR: Samoylenko, V. S. (Doctor of geographical sciences)

ORG: none

TITLE: Experimental and theoretical investigations of radiation heat exchange in the boundary layer over seas and oceans

SOURCE: AN SSSR, Institut okeanologii. Trudy, v. 78, 1965. Issledovaniya atmosfernoy tsirkulyatsii i prizemnogo sloya vozdukha nad Tikhim i Indiyskim okeanami (Studies of atmospheric circulation and the boundary layer of air over the Pacific and Indian Oceans), 128-153

TOPIC TAGS: IR radiation, solar radiation absorption, radiation measurement

ABSTRACT: Radiation balance and atmospheric radiation measurements, made at various altitudes over the Black Sea in 1961 and 1962 were investigated with respect to the radiation and absorption properties of the basic components of the earth's atmosphere. The article discusses the integral coefficients of radiation and absorption, ways of determining integral coefficients of absorption from natural observations, and observations in the Golubaya Bukhta. The authors conclude that the decrease in radiation from a cloudless atmosphere as it nears the earth can be only explained by the difference in the value of the coefficients of absorption and radiation of water vapor.

Card 1/2

L 38676-66

ACC NR: AT6012602

The values of the integral radiation coefficients for the water vapor determined from the measurements in the Golubaya Bukhta are 34-750/g. The reliability of the data is somewhat diminished due to minor faults in the instruments used for the measurements. Orig. art. has: 20 formulas, 6 tables, 6 figures.

SUB CODE: 04,08/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002

Card 2/2 vmb

SAMOYLENKO, V.S.

Reality of air and water masses. Okeanologiia 5 no.1:170-173 '65. (MIRA 18:4)

ACC NR: AM7003452 Monograph UR/

Samoylenko, V. S., ed.

The Pacific Ocean; meteorological conditions over the Pacific Ocean (Tikhiy Okean; meteorolicheskiye usloviya nad Tikhim Okeanom) Moscow, Izd-vo "Nauka", 66. 0390 p. illus., biblio., maps. (At head of title: Akademiya nauk SSSR. Institut okeanologii) Added t.p. in English. Errata slip inserted. 1,000 copies printed.

TOPIC TAGS: ocean, meteorologic observation, atmospheric circulation

PURPOSE AND COVERAGE: This book is the first part of a seven volume compendium of presently available information on the nature and resources of the Pacific Ocean, prepared by members of the Institute of Oceanology of the USSR Academy of Sciences. The first part of the present volume describes the atmospheric circulation over the entire ocean. The general characteristics of circulation patterns in each of the four circulation zones of ocean are given, and formation of air masses in the Pacific and their physical properties are examined. The formation and role of oceanic anticyclones as well as cyclonic activity are described. A special section discusses Pacific tropical cyclones.

Card 1/3 UDC: 551.5(265/266)

ACC NR: AM7003452

Atmospheric circulation at higher levels and jet streams over the Pacific are described. The second part of the book analyzes thermal processes linking the ocean and the atmosphere, evaporation and precipitation, annual heat and humidity turnover. A special cartographic supplement is included. This book can be a valuable reference and handbook for specialists in problems of the Pacific Ocean.

TABLE OF CONTENT [abridged]:

Card 2/3

AM7003452

Part 2. Heat and humidity turnover in the Pacific Ocean

SUB CODE: 04/ SUBM DATE: 28Jul66/ ORIG REF: 088/ OTH REF: 075

Card 3/3

RYZHKOV, N.I., inzh.; ANTSELEVICH, V.D., inzh.; SAMOYLENKO, V.Ye., inzh.

Manufacturing welded derrick of boring rigs. Svar.proizv. no.5:30-31 My '65. (MIRA 18:6)

1. Ural'skiy zavod tyazhelogo mashinostroyeniya imeni Sergo Ordzhonikidze.

L 18913-66 EWT(m)/EWA(h)

ACC NR: AP6007980 (A) SOURCE CODE: UR/0018/66/000/003/0031/0037

AUTHOR: Samoylenko, Ya. (Colonel)

ORG: none

23
B

TITLE: A tactical exercise with a parachute company

SOURCE: Voyennyy vestnik, no. 3, 1966, 31-37

TOPIC TAGS: military training, nuclear warfare training, tactical warfare

ABSTRACT: A step-by-step account of a tactical exercise in which a parachute infantry company attacked an enemy nuclear missile installation (following an atomic strike by the enemy) is presented. The aim of the exercise was to train the company commander to make decisions relating to the landing of airborne troops, and to coordinate the actions of the various units in the company in the performance of their mission in the enemy's rear. The troops were armed with submachine guns, mortars, and recoilless rifles and were accompanied by engineers and chemical and radiation specialists. The mission was to capture and destroy the enemy's nuclear weapons, to attack the enemy's support troops and to fend off counterattacks. The

Card 1/2

L 18913-66

ACC NR: AP6007980 O

exercise was conducted under realistic conditions, HE being used to simulate the nuclear explosions. A detailed schedule and map of the exercise are given. Orig. art. has: 1 figure.

SUB CODE: 15/ SUBM DATE: CO/ ORIG REF: 000/ OTH REF: 000

Card 2/2 mc

ACC NR: AP6036149 SOURCE CODE: UR/0018/66/000/011/0041/0045

AUTHOR: Samoylenko, Ya. (Colonel)

ORG: none

TITLE: Landing on a seacoast [Landing of amphibious and airborne forces]

SOURCE: Voyennyy vestnik, no. 11, 1966, 41-45

TOPIC TAGS: amphibious warfare training, military training, military operation

ABSTRACT: This article describes the combat role and activities of airborne troops working in close cooperation with amphibious forces. As a rule, airborne troops jump into the enemy's rear area shortly before the landing of amphibious forces. During their training, airborne troops work to improve assembly after airdrops, movement along the azimuth, assault from the march column, capturing and destroying coastal defenses, and quickly moving out of the landing area. Orig. art. has: 1 figure

SUB CODE: 15/ SUBM DATE: none/

Card 1/1 UDC: none

KOPP, Mark Filippovich; KHARKEVICH, Anatoliy Dem'yanovich; SHILOV, Oleg Semenovich; SAMOYLENKO, Yevgeniy Andrianovich; MARKOVICH, Aleksandr Yakovlevich; RESHETNIKOV, N.V., retsenzent; METEL'SKIY, G.B., otv. red.; OBRAZTSOVA, Ye.A., red.

[Textbook on telephony] Zadachnik po telefonii. [By] M.F.Kopp i dr. Moskva, Sviaz', 1965. 279 p. (MIRA 18:3)

AID P - 4565

Subject : USSR/Electronics

Card 1/2 Pub. 90 - 8/8

Author : Samoylenko, Yu. I.

Title : Transients in linear circuits when irregular emf is connected.

Periodical : Radiotekhnika, 5, 73-79, My 1956

Abstract : The author explains that to characterize a non-stationary random process occuring with irregular noise signals it is sufficient in practice to determine only the mean statistical value of the output voltage and the dispersion as functions of time. With $t \longrightarrow \infty$ these magnitudes will tend to their steady state values. Formulas to determine steady state noise parameters at the output of linear filters are known. The author aims at finding analogical expressions from the steady state ones for the transient state assuming that $t \longrightarrow \infty$.

AID P - 4565

Radiotekhnika, 5, 73-79, My 1956

Card 2/2 Pub. 90 - 8/8

He presents a method of analyzing transients in linear circuits with irregular signals. The method is used to compare the noise-resistance at the reception of telegraph signals by the method of synchronous integration and by the usual method with frequency selection. Two diagrams, 3 Soviet references (1951-1954).

Institution : None

Submitted : Ap 9, 1955

AUTHOR: Samoylenko, Yu.I. SOV/109-3-11-3/13

TITLE: On the Theory of the Synchronisation of Oscillations in the Systems with n Degrees of Freedom, by Means of Small External Signals (K teorii sinkhronizatsii avtokolebaniy v sistemakh s n stepenyami svobody malymi vneshnimi silami)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 11, pp 1361 - 1372 (USSR)

ABSTRACT: An attempt is made in this work to derive an approximate differential equation for the phase of the oscillations in a system with n degrees of freedom, which generates a complex, periodic wave-form and is subjected to the synchronising action of small, quasi-periodic signals. For the purpose of analysis, it is assumed that, in the absence of external signals, the system produces stable, stationary oscillations having frequencies $n_s\omega_o$ (where n_s is an integer). The external, quasi-periodic signals can be of the following type: a) direct or parametric signals whose amplitudes are of the order of $\mu\varepsilon$ (μ and ε being small parameters) and whose frequencies are multiples

Card1/5

On the Theory of the Synchronisation of Oscillations in the Systems with n Degrees of Freedom, by Means of Small External Signals

of ω_0 ; b) direct signals having amplitudes of the order μ and frequencies which are multiples of ω_0 but are not equal to any of the natural oscillation frequencies of the system. The equations describing the motion of the system can therefore be written as:

$$\sum_{j=1}^{n} f_{mj}(D)y_j = \varepsilon g_m(y_l^{(\sigma)}, \eta_{m\rho}) + \mu e_m(t) + \mu\varepsilon \tilde{e}_m(t, y_l^{(\sigma)}, \eta_{m\rho}) \qquad (1)$$

$$(m, l = 1, \ldots, n, \sigma = 0, \ldots, S, \rho = 1, \ldots, r)$$

where y_j are the co-ordinates of the system, $f_{mj}(D)$ are the operational polynomials, while the functions e_m and $\tilde{e}_m$ are expressed by the first equations on p 1362. The parameters g_m, $\tilde{E}_{mk}$ and $\tilde{K}_{mk}$ in the above expressions are the analytical functions of the co-ordinates y_l and

On the Theory of the Synchronisation of Oscillations in the Systems with n Degrees of Freedom, by Means of Small External Signals

their derivatives up to the order s and of certain analytic functions, $\tilde{\eta}_{m_\rho}$. It is assumed that the solution of Eqs (1) should be in the form of Eq (2). From this, it follows that Eqs (1) can be written as Eqs (3). The parameters z_j in Eqs (3) can be expressed by Eq (4). By comparing Eqs (1) and (3), it is possible to obtain Eq (5). This, after a number of modifications and substitutions, leads to Eq (6). On the basis of the Bulgakov theory (Refs 9 and 10), Eq (6) can be transformed into Eqs (8) by adopting the transformation defined by Eq (7). If stable amplitudes and phases of the oscillations are denoted by A_s and φ_s and if the variables of Eqs (8) are changed in accordance with the rules expressed by Eqs (9), the final system of equations can be written in the form of Eqs (10). The investigation and the solutions of Eqs (10) permits the determination of the basic stationary relationship which characterises the mutual synchronisation of the oscillations in the system and, in particular, the dependence of the amplitude and the phase

On the Theory of the Synchronisation of Oscillations in the Systems with n Degrees of Freedom, by Means of Small External Signals

on the de-tuning ν_s. From the above (and on the basis of Eqs (15) and (16)), the final differential equation for the phase of the oscillations is in the form of Eq (17), where $\omega_0 t = u + \theta$. This equation can be used to determine the first-order approximation to the solution of the problem; the approximation is obtained by integrating one of the first-order equations of the equation system (17). The final first-order solution of the system is therefore in the form of Eq (18). The above formula is used to analyse the particular case when the amplitudes of the harmonics of all the interacting signals change in the same manner and when the phase shifts between harmonics are constant. In this case, Eq (17) is in the form of Eq (19), where Z is a certain periodic function which satisfies the Dirichlet conditions and can be determined from the formula on p 1370.

SOV/109-3-11-3/13
On the Theory of the Synchronisation of Oscillations in the Systems with n Degrees of Freedom, by Means of Small External Signals

There are 10 references, 8 of which are Soviet and 2 English.

SUBMITTED: March 18, 1957

Card 5/5

S/194/61/000/009/025/053
D209/D302

16.4000

AUTHORS: Grishuk, V.P., Samoylenko, Yu.I.

TITLE: Approximate method for selecting optimum adjustments of an intermittent regulation system

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 9, 1961, 43, abstract 9 V347 (V sb. Avtomatiz. i priborostroyeniye, no. 1, Kiyev, Gostekhizdat USSR, 1959, 80-87)

TEXT: An impulse system of automatic regulation consisting of a first order object with a delay, an impulse element of the second type and a servomotor with constant speed, is examined. The proposed method of its analysis is based on substitution of the actual system of intermittent regulation by a certain system equivalent to it as far as the parameters of the regulator adjustment are concerned, whose linear part includes an aperiodic element, an integrating element and a delay element. The equivalent delay time τ and the

Card 1/2

Approximate method...

equivalent time constant of the aperiodic element Ta can be determined by corresponding approximation of the amplitude-phase characteristic of the system. The stability of this system is investigated by the frequency method. Designations of the system parameters which secure the necessary margin of stability, are determined. The parameters of the system adjustment that result in the following process quality indicators are found: overshoot, error and regulation time. 5 references. [Abstracter's note: Complete translation]

Card 2/2

SOV/109-4-1-6/30

AUTHOR: Samoylenko, Yu.I.

TITLE: Selective Properties of an Oscillatory System which is Synchronised by a Sinusoidal Signal (Izbiratel'nyye svoystva avtokolebatel'noy sistemy, sinkhronizirovannoy garmonicheskim signalom)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 1, pp 39 - 42 (USSR)

ABSTRACT: It is assumed that when an oscillator is synchronised by a sinusoidal signal and is subject to the interaction of a perturbing electromotive force, the perturbance can be regarded as quasi-sinusoidal. The problem consists of determining the amplitude and phase deviations of the oscillator as a function of the perturbing signal. The behaviour of the system considered can be described by:

$$\frac{d^2x}{dt^2} + 2f(x)\frac{dx}{dt} + \omega^2 x = \omega^2 S\cos(\omega + \nu)t + \omega^2 N(t)\cos\left[(\omega + \nu)t + \gamma(t)\right] .$$

Card1/3

Selective Properties of an Oscillatory System which is Synchronised by a Sinusoidal Signal

If, in the absence of the perturbation, the oscillator has a steady-state amplitude A and a phase φ, such as defined by:

$$x = A \cos \left[(\omega + \nu) t - \varphi \right]$$

the effect of the perturbation can be taken into account by assuming that A undergoes a change α and φ undergoes a change ϑ; these are defined by:

$$R = A(1 + \alpha), \quad \theta = \varphi - \vartheta \qquad \left(|\alpha| \ll 1, \ |\vartheta| \ll \frac{\pi}{2} \right).$$

Provided α is comparatively small and $\vartheta \ll \pi/2$, the system can be described by Eqs (1). If $\alpha = 0$ and $\vartheta = 0$ at $t = 0$, the solutions of Eqs (1) are given by Eqs (3) and (4). These equations can be employed to analyse a number of special cases. In particular, when the perturbation is sinusoidal and $\gamma(t) = \delta t$, the phase deviations can be evaluated from Eq (5), while the amplitude

Selective Properties of an Oscillatory System which is Synchronised by a Sinusoidal Signal

modulation is defined by Eq (7). If the oscillator is perturbed by a fluctuation noise which has a spectral density W and is contained within a bandwidth Ω, the square deviation of the phase is defined by Eq (8), where σ_n^2 is the square deviation of the noise at the output of the filter. The square deviation of the amplitude of the oscillator is defined by Eq (9).
There are 6 references, 4 of which are Soviet and 2 English.

SUBMITTED: March 23, 1957

Card 3/3

SAMOYLENKO, Yu. I., Cand Tech Sci -- (diss) "Non-stationary processes in the synchronization of autooscillations of Thompson type generators by weak external forces." Kiev, 1960. 15 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Kiev Order of Lenin Polytechnic Inst); 200 copies; price not given; bibliography at end of text (17 entries); (KL, 22-60, 139)

SAMOYLENKO, Yu.I.

Synchronization stability when modulated oscillations are acting upon a self-oscillator. Radiotekhnika 15 no.7: 37-41 Jl '60. (MIRA 13:7)
(Oscillators, Electric)

L 20216-65 EWT(d)/EPF(n)-2 Po-4/Pq-4/Pg-4/Pu-4/Pk-4/Pl-4 IJP(c)/ASD(a)-5/ ASD(s)/AFMD(p)/ESD(dp) WW/BC

ACCESSION NR: AP4048821 S/0280/64/000/005/0030/0038

AUTHOR: Mozgovaya, E.A. (Kiev); Samoylenko, Yu. I.(Kiev)

TITLE: Construction of the optimal algorithm of extremum control, based on the principle of dynamic programming

SOURCE: AN SSSR. Izv. Tekhnicheskaya kibernetika, no. 5, 1964, 30-38

TOPIC TAGS: automation, extremum control, control algorithm, dynamic programming, control system optimization

ABSTRACT: The feedback system investigated by the author is shown in Figure 1 of the Enclosure. Here, λ_k is a discrete random disturbance, such that $\lambda_{k+1} = \lambda_k + \mu_k$, where μ_k is statistically independent with a continuous distribution density $w(\mu_k)$ and where $z_k = u_k$ is the regulating function increment. For the open loop transfer function $y = x^2$ an inertialess object, it is required to find a regulating algorithm which allows determination of u_{k+1} from the observed value of y_k and from all previous information on ($k-2$, $k-1$), such that the average value of the output signal y be a minimum. Using the Bayes formula to obtain the required a posteriori probabilities p_k and applying

Card 1/4

L 20216-65
ACCESSION NR: AP4048821

the minimum risk criterion to find the minimum risk function $Q(z_k, y_k, p_k)$, the desired regulating function ζ is found to be that value of z_k which gives a minimum Q. Assuming known initial conditions $u_0 = \lambda_0$, the optimum regulating function $z = \zeta(y,p)$ is evaluated for the gaussian $w(\mu_k)$ and is shown in Figure 2 of the Enclosure. In general the optimum regulating algorithm is then constructed as follows: Find μ_{ij} $(i, j = 1, 2)$ using the value u_k and v_{k-1} from previous computations; find the density $w_{ij}^{(k)}$ from the Bayes formula; add to the probability p_k of the hypothesis λ_k, (i.e. $\lambda_u = u_k + \sqrt{v_k}$) using the previous value p_{k-1} and a known value of p_0; find z_k from $z_k = \zeta(y_k, p_k)$, where ζ is a previously determined function; the next value of the optimum regulating function is $u_{k+1} = u_k + z_k$. Orig. art. has: 26 equations and 5 figures.

ASSOCIATION: None

SUBMITTED: 23Aug63 ENCL: 02 SUB CODE: DP, IE

NO REF SOV: 006 OTHER: 001

Card 2/4

L 20216-65
ACCESSION NR: AP4048821 ENCLOSURE: 01

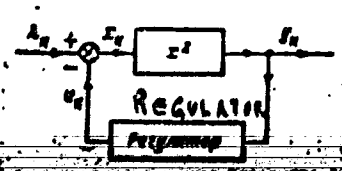


Fig. 1. Schematic diagram of a feedback system.

Card 3/4

ENCLOSURE: 02

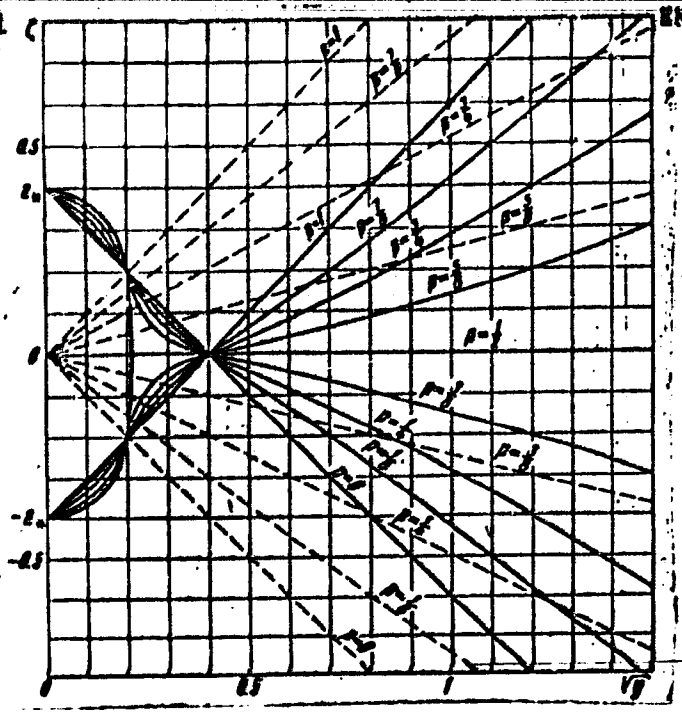


Fig. 2. Plot of the optimum control function for the case of normal distribution of the external perturbance increments.

Card 4/4

L 9[illegible] EWT(d)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l) IJP(c) GS

ACC NR: AT5028933 SOURCE CODE: UR/0000/65/000/000/0006/0024

44,55 44,55

AUTHOR: Volkovich, V. L.; Samoylenko, Yu. I.

58
B+1

ORG: None

TITLE: Optimum filtration in spatially distributed systems

SOURCE: AN UkrSSR. Slozhnyye sistemy upravleniya (Complex control systems). Kiev, Naukova dumka, 1965, 6-24

TOPIC TAGS: optimal control, electric filter, probability, random process 14,44,55

ABSTRACT: Following a brief survey of the literature on application of the theory of random processes to control systems with distributed parameters, the authors examine one of the problems involved in synthesis of an optimum distributed system for useful signal filtration when there is interference from random fields. The distributed reception systems to be synthesized may either be independent, e.g. in the communication channels, or be part of the control system as distributed pickup units. Because of the bilateral nature of the communication channels, the results for distributed receivers may be extended to distributed transmitters (controllers). Analysis shows that the distributed filtration system has the advantage of near-regularity, i.e. the error in reproduction of useful information may be reduced to an unlimited extent by reduction of the noise inherent in the filter. The system is also found to be highly reliable. Simultaneous failure of more than one of the receiving units does not

Card 1/2

2

L 9615-66
ACC NR: AT5028933

disrupt the operation of the system, but only raises the error slightly. The system may be used for simultaneously controlling the state of a field at various points with a single distributed pickup and several integral transducers with weight functions which depend on the control point. The principal disadvantage of systems in this class is the technical complexity involved in making a distributed pickup unit. Nevertheless, this complexity is an absolute necessity for precise and reliable control of objects with distributed parameters. It is pointed out that the proposed method for synthesis of optimum filters provides for synthesis of systems with a finite set of point pickups. It must only be kept in mind that in this case the basis of the system is a discrete point set with an extent uniformly distributed among all its points. The property of near-regularity is lost in a system of this type. The following important problems in the theory of field filtration are mentioned: 1. determining the optimum operator in the case of a linear filter for a spatially distributed signal (distributed transmitter); 2. synthesis of an optimum linear communication channel with distributed transmitter and receiver; 3. the problem of optimum filtration for a signal from a moving source; 4. synthesis of an optimum filter system when there are fluctuations in the main part of the transmission channel. Orig. art. has: 3 figures and 43 formulas.

SUB CODE: 09 / SUBM DATE: 03Aug65 / ORIG REF: 014 / OTH REF: 001
13

Card 2/2